# ELEKTRA BECKUM

(D) **Bedienungsanleitung Doppelschleifmaschinen**

(GB) **Operating Instructions for Double Bench Grinders**

(F) **Notice d'emploi Ponceuse double**

(NL) **Gebruiksaanwijzing dubbelslijpmachine's**

(DK) **Betjeningsvejledning dobbelt-slibemaskine**

(N) **Bruksanvisning dobbeltslipemaskiner**

(S) **Handledning för dubbelslipmaskin**

(SF) **Käyttöohje kaksoishiomakone**

(I) **Istruzioni per l'uso Rettificatrici doppie**

(E) **Instrucciones de servicio Amoladora doble**

(P) **Instruções de serviço de máquinas de retificação dupla**

**DS 125 W**
**DS 150 W**
**DS 175 W**
**DS 175 D**
**DS 200 W**
**DS 200 D**

English only

| | | |
|---|---|---|
| (D) | **Achtung!** | Lesen Sie diese Anleitung vor der Installation und Inbetriebnahme aufmerksam durch. |
| (GB) | **Attention!** | Carefully read through these instructions prior to installation and commissioning. |
| (F) | **Attention!** | Prière de lire attentivement la présente notice avant l'installation et la mise en service. |
| (NL) | **Attentie!** | Lees deze instructies voor de installatie en ingebruikname aandachtig door. |
| (DK) | **Bemærk!** | Læs denne vejledning opmærksomt igennem inden installationen og idrifttagningen. |
| (N) | **Se opp!** | Vær så vennlig å først gjennomlese nøyaktig denne veiledningen før installasjonen og idriftsettelsen. |
| (S) | **Observera!** | Var god och läs noga igenom denna handledning före installering och idrifttagande. |
| (SF) | **Huomio!** | Lue tämä ohje huolellisesti läpi ennen asennusta ja käyttöönottoa. |
| (I) | **Attenzione!** | Prima dell'installazione e della messa in esercizio, leggete attentamente e completamente queste istruzioni. |
| (E) | **Atención!** | Lea atentamente estas instrucciones antes de la instalación y puesta en marcha. |
| (P) | **Atenção!** | Faça favor der ler atentamente estas instruções antes da instalação e colocação em funcionamento. |

115 162 4053 / D/GB/F/NL/DK/N/S/SF/I/E/P / 2097 - 2.5

## General Information

Use your double bench grinder to sharpen cutting tools and for grinding of small metal parts (e.g. deburring, surface working etc.).
These instructions contain information on the specified conditions of use as well as information on work safety and the selection of suitable grinding wheels.
Should you, after having studied these instructions, have any further questions regarding your double bench grinder or any other product made by Elektra Beckum AG, please write to

**Elektra Beckum AG**
**Customer Service**
**P.O.Box 13 52**
**D-49703 Meppen**
**Germany.**

## Specified Conditions of Use

Double bench grinders shall under observance of all safety and operating information be used only for grinding/ sharpening of knives, wood and stone chisels, scissors and other cutting tools, and for grinding of small metal parts.

## Product Liability/Warranty

This product shall only be used as specified. Any other use requires the written consent of Elektra Beckum AG, P.O.Box 1352, D-49703 Meppen, Germany.
This product carries a 12 months manufacturer warranty under the prevailing legal provisions, which may vary from country to country. The warranty period begins with the date of the original purchase by the end user. Proof of purchase should be retained and must be presented in the event of a warranty claim. This warranty excludes and does not cover defects, malfunctions and failures caused by natural wear, overload, unreasonable use or failure to provide reasonable and necessary maintenance.
In case of a defect notify your dealer or Elektra Beckum dealer or authorized service centre.
Elektra Beckum reserves the right to change specifications and design without prior notice and without incurring obligation of any kind.

## Safety Information

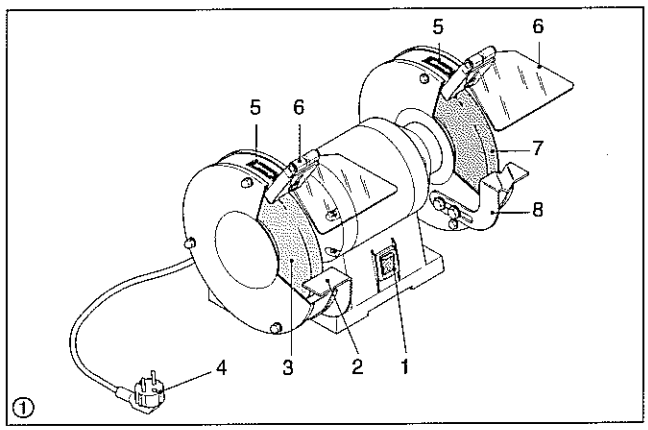
⚠ A grinding machine is a power tool developing high rpm's during operation.

As with all power tools there is a certain amount of hazard involved with the operator and his use of the machine. Using the machine with the respect and caution demanded as far as safety precautions are concerned will considerably lessen the possibility of personal injury. If, however, normal safety precautions are overlooked or completely ignored, personal injury to the operator can develop.

In the interest of work safety we strongly recommend you observe the following information:
- Never work without safety goggles.
- Ensure that machine can not be started by children.
- Regularly check all bolted connections being tight.
- Prior to commissioning tool rests and spark protection assemblies have to be installed.
- To ensure safe operation the grinder should be bolted to a workbench, wall bracket or pedestal stand.
- Do not operate machine without wheel covers in place.
- The adjusting guard plate must be frequently set to compensate any wear of the grinding wheel. The distance between the adjusting guard plate and the grinding wheel must be kept as small as possible and never greater than 2 mm.
- The work piece support must be set gradually to compensate any wear of the grinding wheel. The distance between the adjusting guard plate and the grinding wheel must be kept as small as possible and never greater than 2 mm.
- Ensure that switch is in the OFF position before plugging in.
- Use only faultless grinding wheels.
- Never put your finger between tool rest and grinding wheel or between grinding wheel and wheel cover (risk of injury by squashing).
- This appliance should be operated on a residual current device (RCD) of 30 mA capacity.
- Check power cable and plug prior to every use.
- Have a damaged power cable replaced by a qualified electrician without delay. Risk of electric shock if operated with a damaged power cable!
- Wear suitable apparel with snug fitting sleeves.
- Store grinding wheels in a dry place at a steady temperature if possible.
- Never use damaged or malformed grinding wheels.
- Mount grinding wheels only with the flanges supplied with the machine. The liners between flange and wheel must be of elastic material such as rubber, soft cardboard etc.
- Do not attempt to enlarge the arbor bore of a grinding wheel.
- Always pull out the plug before changing the grinding wheel, setting or repairing the double grinding machine.
- Ensure safe footing when operating the bench grinder.
- Always disconnect from power by pulling the plug
  - when the grinder is not used
  - when servicing or
  - when changing grinding wheels.
- Do not expose this appliance to rain and do not use it in damp or wet locations.
- Observe the maximum output/capacity of the grinding machine (see nameplate); do not subject it to overloads.
- From time to time re-measure the thickness of the metal of the work piece support. The support must be replaced if it is so worn that its thickness measures only 1.8 mm at any one point.

## Machine Components

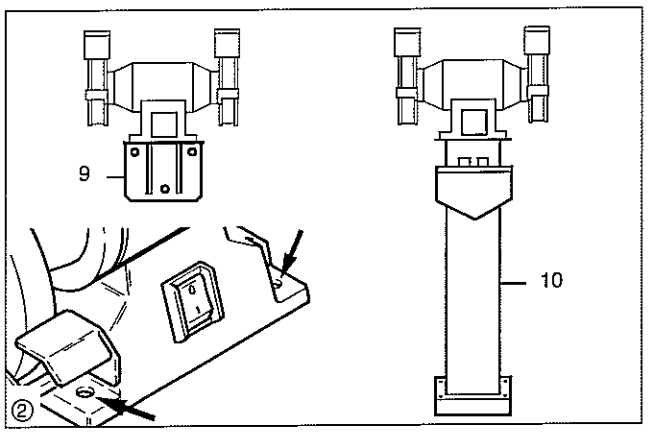
Comment: Several constructive details distinguish these double grinding machines. The handling, described in the following, is in principle the same with all machines.




1 Switch ON/OFF
2 Tool rest, left
3 Grinding wheel, left
4 Power cable with plug
5 Indicator for direction of rotation (sticker)
6 Spark protection assembly
7 Grinding wheel, right
8 Tool rest, right

## Machine Installation

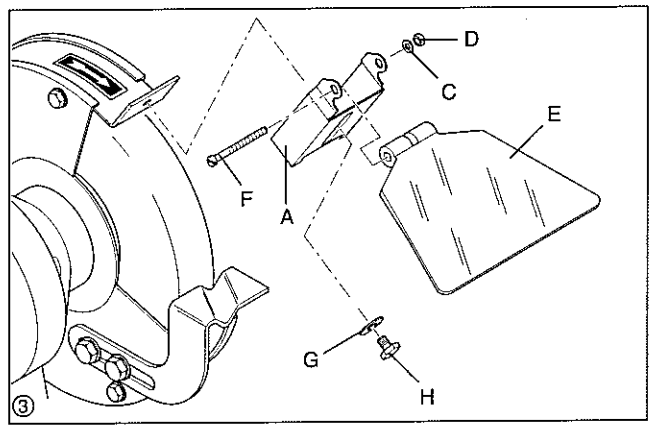
The grinding machine should be firmly mounted in a suitable location. For mounting on a firm and flat base 4 holes are provided in the machine's base (see arrows in fig. 2). The height should be chosen so that the tool rest is at about elbow height. Ensure a power outlet is available at a distance of approx. 100 - 150 cm.
Elektra Beckum can supply floor or wall mounted supports (see fig. 2) fulfilling the requirements for stability and correct working height.

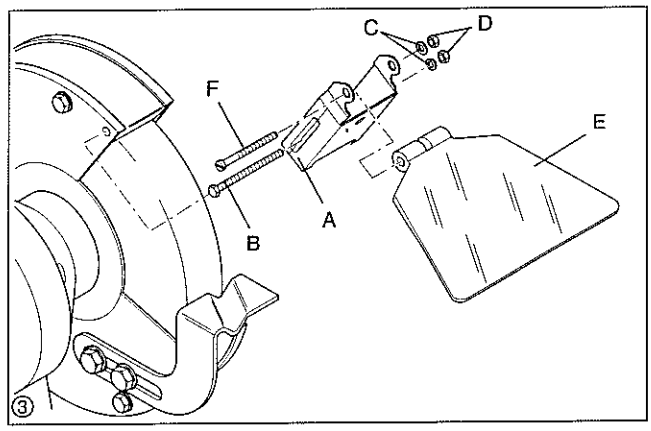



9 Wall bracket stock-no. 090 000 1150
10 Pedestal support base stock-no. 090 000 1134

## Installation of Spark Protection Assembly

For reasons of packing the spark protection assembly is not factory installed and needs to be user installed before operation of the machine. Fig. 3 shows the components of the spark protection assembly and how they are installed to the grinding wheel cover on the right hand side.
Installation to the left hand side wheel cover is similar.

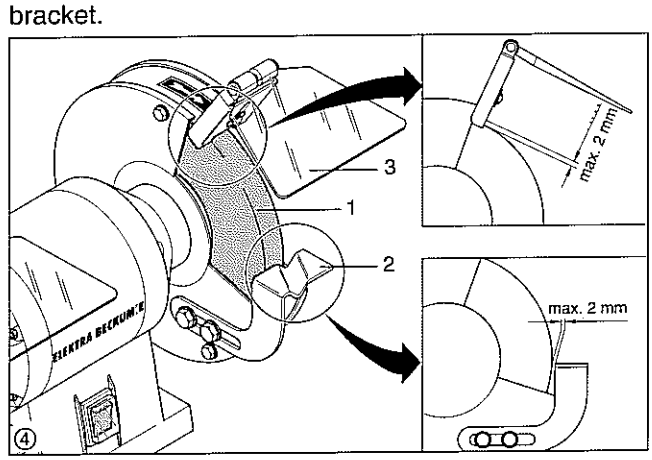



A adjusting guard plate
B hexagon head bolt M 4 x 55
C lock washer
D hexagon nut M 4
E spark glass guard
F slotted screws
G disk
H hexagon head screw M 5 x 20

## Setting of Tool Rest and Spark Arrester Bracket

The tool rest and spark protection assembly's spark arrester bracket have to be set from time to time to compensate for grinding wheel wear. The gap between tool rest and wheel should not be more than 2 mm and not more than 2 mm between wheel and spark arrester bracket.




1 Grinding wheel
2 Tool rest
3 Spark arrester bracket

## Prior to Commissioning

The mains voltage must correspond with the voltage stated on the machine's name plate.
The grinding wheels are to be subjected to a resonance test (see section Grinding Wheel Check below). This resonance test is also to be carried out when replacement grinding wheels are mounted.
The grinder is to be subjected to a no-load trial run for at least 5 minutes. Do not stand in the grinder's danger zone during this trial run.

## Commissioning

This double bench grinder is used for rough grinding. Please note that it is not intended for continuous operation. To prevent possible overloading/overheating it should not be operated for more than 15 - 30 minutes at a time. Let grinder cool down before operating again.
Apply moderate pressure when holding the workpiece against the grinding wheel. Remember that the metal heats up by the grinding. The workpiece should therefore regularly cooled by submerging it in cold water.
The dry grinding wheels of this bench grinders are suitable for rough grinding only.

## Size of part to be machined

The part to be machined must at least be large enough to hold securely in both hands.
A larger work piece must also be able to be held securely in and must not slip from the work piece support during the grinding process. When selecting the size of the work pieces, please bear in mind the grinding capacity of your grinding machine.

## Drill grinding

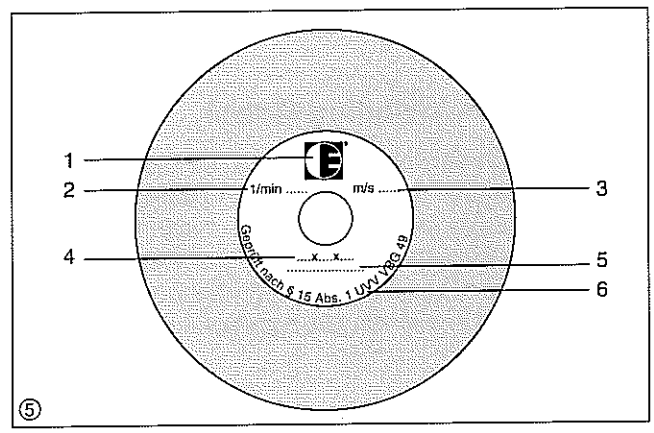
The work piece support on the right grinding wheel is fitted with a trough for drill grinding.
After switching on the double grinding machine hold the drill to be ground with both hands and push it into the trough. Then carefully guide the tip of the drill towards the grinding wheel and slowly turn the drill throughout the entire grinding process.

## Selecting a suitable Grinding Wheel

This Elektra-Beckum double bench grinder is factory fitted with two different normal corundum grinding wheels. On one side a wheel with a coarse grit is mounted, on the other side a fine grit grinding wheel. As a rule, the bulk of the arising grinding works such as the grinding of various axes, drill bits and screw drivers can be accomplished with this grinding wheel. For other jobs, especially the sharpening of knifes as well as the machining of hardened steel, a suitable grinding wheel according to the table on page 9 should be selected. Please keep in mind that there is no grinding wheel type suitable for all different requirements and the choice of the right grinding wheel is critical for the result of your work.

## Grinding Wheels

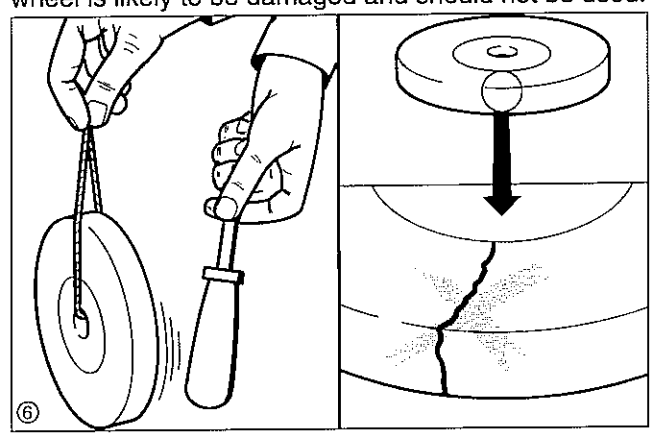
When replacing grinding wheels it is important to ensure that the new wheel fits your grinding machine (see fig. 5), i.e. arbor bore size, outer diameter and wheel width must correspond with the original grinding wheel. This information is shown on all commercially available grinding wheels. It is recommended to check if an approval code is shown on the grinding wheel and to buy only approved grinding wheels. Elektra Beckum genuine grinding wheels are guaranteed for a constant high quality level. They are available at your Elektra Beckum dealer in all common sizes and compositions.




1 Manufacturer's address or stamp
2 Permissible speed in r.p.m.
3 Maximum working speed in m/s
4 Nominal size
5 Material (coded)
6 Test mark

## Grinding Wheel Check

Before a new grinding wheel is mounted it should be subjected to a visual inspection and a resonance test, to detect any possible defects or cracks. For the resonance test, let the wheel hang from a piece of string and tap lightly with a screwdriver handle or similar (no metal!). If the sound is not clear, but rather dull and hollow the wheel is likely to be damaged and should not be used.




The grinding wheel should slide onto the arbor easily. Forcing it on the arbor, e.g. by striking with a hammer, may break the wheel and is not permissible for safety reasons. For the same reason the drilling out of too small an arbor bore is not permitted.
After the new wheel is mounted it should be left running idle for at least 5 minutes. Screen off workplace to prevent damage in case the wheel breaks and stay out of the danger zone.

## Grinding Wheel Wear

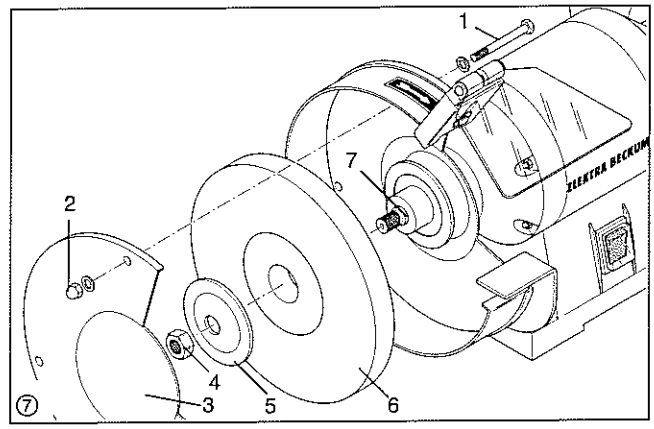
Grinding wheels will naturally wear down with use. This requires a regular resetting of the tool rest and spark arrester bracket to the gap size as shown in figure 5. When a certain minimum wheel diameter is reached the tool rest can not be set any closer and the wheel has to be replaced. Depending on the grinding wheel diameter the following minimum wheel diameters ($d_{min}$) apply:

| | 125 Ø | 150 Ø | 175 Ø | 200 Ø |
|---|---|---|---|---|
| $d_{min}$ | 75 mm | 110 mm | 130 mm | 135 mm |

## Changing the Grinding Wheel

If the wheel needs replacement because it is worn down or you want to use a different type of grinding wheel, the mounted wheel is to be removed as shown in figure 7. Please make sure that the hexagon nut (item 4) on the left side of the machine has a left-handed thread, i.e. must be turned in a clockwise direction to undo.

Never confuse the two hexagon nuts (item 4): This could damage the thread on the rotary shaft (item 7).




1 Hexagon head cap screw
2 Hexagon nut (if necessary with serrated lock washer)
3 outer wheel cover
4 Hexagon nut (on the left side of the machine with left-handed thread!)
5 counter flange
6 grinding wheel
7 Rotary shaft

## Changing the Grinding Wheel

If the wheel needs replacement because it is worn down or you want to use a different type of grinding wheel, the mounted wheel is to be removed as shown in figure 7. Please make sure that the hexagon nut (item 4) on the left side of the machine has a left-handed thread, i.e. must be turned in a clockwise direction to undo.

## Cleaning

⚠ **Caution!** Always pull out the plug prior to cleaning!

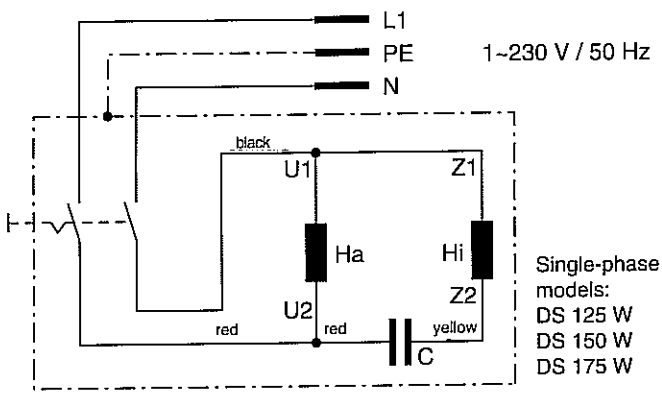
Occasionally clean the outside of the double grinding machine using a damp cloth.
Make sure to clean the inside of the grinding wheel casing. The grinding wheels must always be able to run smoothly within the casing.

## Specifications

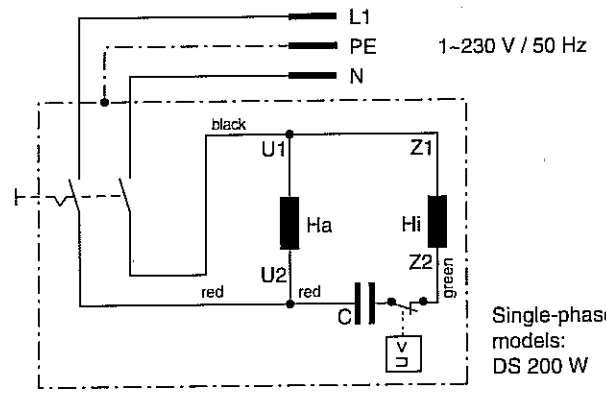
| | DS 125 W | DS 150 W | DS 175 W | DS 175 D | DS 200 W | DS 200 D |
|---|---|---|---|---|---|---|
| **Stock-no.** | **030 001 2540** | **030 001 5034** | **030 001 7533** | **030 001 7541** | **030 002 0003** | **030 002 0011** |
| Power supply | 1 ~ 230 V | 1 ~ 230 V | 1 ~ 230 V | 3 ~ 400 V | 1 ~ 230 V | 3 ~ 400 V |
| Motor power $P_1$ | 200 W | 330 W | 450 W | 570 W | 580 W | 740 W |
| No-load speed | 2750 $min^{-1}$ | 2750 $min^{-1}$ | 2750 $min^{-1}$ | 2600 $min^{-1}$ | 2650 $min^{-1}$ | 2600 $min^{-1}$ |
| Grinding wheel Ø | 125 mm | 150 mm | 175 mm | 175 mm | 200 mm | 200 mm |
| Grinding wheel width | 20 mm | 20 mm | 25 mm | 25 mm | 25 mm | 25 mm |

Machine noise information: workplace sound pressure $L_p$ level below 80 dB(A).

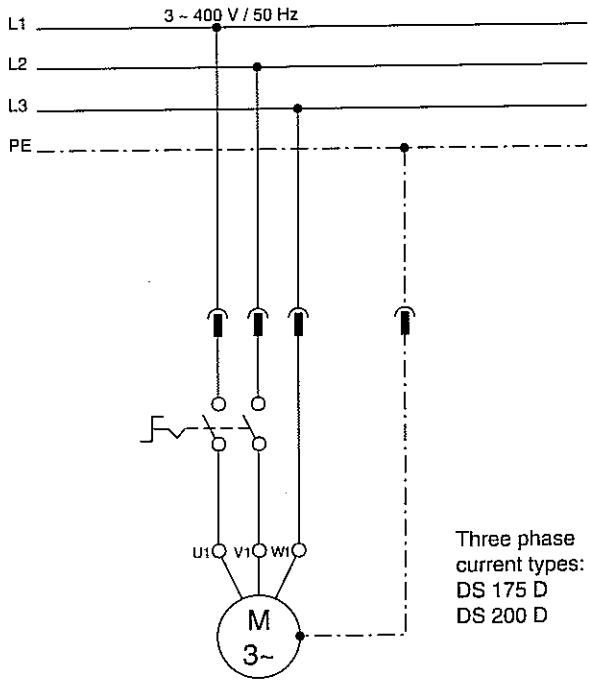
## Connection to Power Mains




Single-phase models:
DS 125 W
DS 150 W
DS 175 W




Single-phase models:
DS 200 W




Three phase current types:
DS 175 D
DS 200 D

| rough grinding | fine grinding | deburring | polishing | derusting | screwdrivers | chisels | knives | wood chisels | turning chisels | carving chisels | drill bits | cleaving tools | scissors | plain steel | tungsten carbide | grey iron | copper | aluminium | glass | ceramics | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ● | | | | | ● | ● | | | | | | ● | | ● | | | | | | | normal corundum, coarse |
| | ● | | | | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | | | | | | | normal corundum, fine |
| | ● | | | | | ● | ● | ● | ● | ● | ● | | ● | | ● | ● | ● | ● | ● | ● | special fused alumina |
| | | | ● | | | | | | | | | | | ● | | | ● | ● | ● | ● | felt wheel |
| | | | ● | | | | | | | | | | | ● | | | ● | ● | ● | ● | polishing wheel |
| | | ● | | ● | | | | | | | | | | ● | | ● | ● | ● | | | flap wheel |
| | | | | ● | | | | | | | | | | ● | | ● | | | | | wire bush |

**ELEKTRA BECKUM**
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CE

# EG-Konformitätserklärung - *EC conformity declaration* - Déclaration de conformité CEE *EG-verklaring van overeenstemming* - EF-overensstemmelsesattest - *EG-konformitetsdeklaration* EF-konformitetserklæring - *Selvitys ey-standardinmukaisuudesta* - Dichiarazione di conformità CE *Declaración de conformidad-UE* - Declaração de conformidade CE

Wir erklären, daß die Bauart der Maschinen/des Gerätes - *We declare that the design of the machine/appliance*
Nous certifions que le type de la machine/de l'appareil - *Wij verklaren dat de constructie van de machine/het apparaat*
Vi erklærer, at konstruktionen af maskinen/apparatet - *Härmed försäkrar vi att maskin/apparat* - Vi erklærer at konstruksjonsmåten til maskin/apparat
*Täten selvitämme, että alla mainittu kone/laite* - Dichiariamo che il modello della macchina/dell'apparecchio
*Declaramos, que el modelo de la máquina/aparato* - Declaramos que o tipo de construção da máquina/do aparelho

**Schleifer Serie**

**DS 125 W - DS 150 W - DS 175 W - DS 175 D - DS 200 W - DS 200 D**
**BS 150 W - BS 175 D - TN 150 W - TN 175 W - TN 175 D - AP 150 W/ FL - SP 150 W**

folgenden einschlägigen Bestimmungen entspricht - *corresponds with the following relevant regulations*
est conforme aux règlements applicables suivants - *aan de volgende terzake geldende voorschriften voldoet* - opfylder følgende gældende bestemmelser
*enligt sitt byggsätt motsvarar följande gällande föreskrifter* - oppfyller de følgende gjeldende bestemmelser
*vastaa seuraavia asiaa koskevia määräyksiä* - corrisponde alle seguenti norme in materia
*se ajusta a las siguientes directrices correspondientes* - se enquadra com as seguintes disposições pertinentes:

EG-Maschinenrichtlinie - *EC machine directive* - directive CEE pour les machines - *EG-machinerichtlijn* - EF maskindirektiv - *EG-maskindirektiv*
EF maskindirektiv - *Koneita koskeva EY-direktiivi* - Direttiva CE per macchinari - *Directriz de máquinas-UE* - Directiva CE para máquinas
89/392/EWG
91/368/EWG
93/44/EWG
93/68/EWG

EG-Richtlinie Elektromagnetische Verträglichkeit - *EC-directive electro-magnetic compatibility* - directive CEE sur la conformité électromagnétique
*EG-richtlijn elektromagnetische compatibiliteit* - EF-direktiv vedr. elektromagmetisk fordragelighed - *EG-direktiv för elektromagnetisk tolerans*
EF-direktiv om elektromagnetisk kompatibilitet - *Sähkömagneettista toleranssitasoa koskeva EY-direktiivi* - Direttiva CE compatibilità elettromagnetica
*Directriz-UE Compatibilidad electromagnética* - Directiva CE sobre compatibilidade electromagnética
89/336/EWG
92/31/EWG

EG-Niederspannungs-Richtlinie - *EC-Low voltage directive* - Directive CEE de basse tension
*EG-laagspanningsrichtlijn* - EF-lavspændingsdirektiv - *EG-direktiv för lågspänning*
EF-direktiv om lavspenning - *Pienjännitettä koskeva EY-direktiivi* - Direttiva CE per bassa tensione
*Directriz para baja tensión-UE* - Directiva CE sobre baixa tensão
73/23/EWG
93/68/EWG

Angewendete nationale Normen - *Applied national standards* - normes nationales appliquées - *Toegepaste nationale normen*
Anvendte tyske standarder - *Tillämpade nationella direktiv* - Anvendte nasjonale normer - *Sovelletut kansalliset normit* - Norme nazionali applicate
*Normas nacionales aplicadas* - Normas nacionais aplicadas
E DIN VDE 0740 - Teil 507

Technischer Leiter - *Technical Manager* - Le responsable technique - *Chef techniek* - Teknisk leder - *Produktledare*
Teknisk leder - *Tekninen johtaja* - Direttore tecnico - *Director técnico* - O director técnico